



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,651	12/05/2003	Shunpei Yamazaki	12732-051002	8958
26171	7590	11/18/2005	EXAMINER	
FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022				SEFER, AHMED N
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/727,651	YAMAZAKI ET AL. <i>(FM)</i>
	<b>Examiner</b>	<b>Art Unit</b>
	A. Sefer	2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 22 August 2005.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-11,19-30,38-42,80-83,121 and 122 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-11,19-30,38-42,80-83,121 and 122 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment filed August 22, 2005 has been entered; no new claims have been introduced.

### ***Specification***

2. The disclosure is objected to because of the following informalities: In claim 38, the word "haloger" should read "halogen".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-11, 19-30, 38-42, 80-83, 121 and 122 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamazaki et al. ("Yamazaki") JP 11-345767/equivalent USPN 6,087,679 ('679).

Yamazaki discloses in figs. 5-7 and 16 a thin film transistor or semiconductor device (as in claims 20 and 21) comprising: at least a channel forming region in a crystalline semiconductor film comprising silicon. Since Yamazaki teaches (col. 18, lines 46-50 of '679) that it is effective to use a silicon containing germanium at 1-10 % (as in claims 5, 6, 24 and 25) for the channel formation region, it is inherent that not smaller than 20% or not smaller than 5% (as in claims 2

and 21) of a lattice plane [101] of the crystalline semiconductor film has an angle of not larger than 10 degrees with respect to a surface of the crystalline semiconductor film, not larger than 3% of a lattice plane [001] of the crystalline semiconductor film has an angle of not larger than 10 degrees with respect to the surface of the crystalline semiconductor film, not larger than 5% of a lattice plane [111] of the crystalline semiconductor film has an angle of not larger than 10 degrees with respect to the surface of the semiconductor

As to the method of detecting, it does not have a patentable weight since "product by process" claims are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685 and *In re Thorpe*, 227 USPQ 964, 966. Therefore, the way the product was made does not carry any patentable weight as long as the claims are directed to a device. Further, note that the applicant has the burden of proof in such cases, as the above case law makes clear. Also see MPEP 2113.

Regarding claims 3, 4, 7 and 8, Yamazaki discloses (cols. 2 and 4, lines 36-45 and 26-40 of '679 respectively) a crystalline semiconductor film comprising nitrogen and carbon and oxygen each within the recited range.

Regarding claims 9, 10, 28, 29, 39, 40, 80 and 81 Yamazaki discloses (col. 6, lines 18-34 of '679) a crystalline semiconductor film comprising a metal element selected from the group Ni, Co and Fe (as in claims 10, 29, 40 and 81) at a concentration within the recited range.

Regarding claims 11, 30, 41 and 82, Yamazaki discloses (see '679) a crystalline semiconductor film having a thickness within the recited range.

Regarding claims 19, 38, 42 and 83, Yamazaki discloses (see '679) a crystalline semiconductor film comprising a halogen element.

Regarding claims 121 and 122, Yamazaki discloses a semiconductor device comprising one selected from the group consisting cell phone, a video and a digital camera.

***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-11, 19-30, 38-42, 80-83, 121 and 122 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 and 1-21 of U.S. Patent Nos. 6,956,235 ('235) and 6,787,807 ('807) respectively. Although the conflicting claims are not identical, they are not patentably distinct from each other because the application and both '235 and '807 disclose similar device, thus allowing unjustified timewise extension of the “right to exclude” granted by '235 and '807.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (571) 272-1921.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANS  
November 13, 2005

  
NATHAN J. FLYNN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800